

DryCal® DC-2



The Original Dry Primary Calibrator for Flow Verification

The DryCal DC-2 primary flow meter is the original air flow calibration standard from Bios International, the world leader in dry piston technology. The DryCal brings the advantages of primary, high-speed volumetric calibrations to your organization in a small, easy-to-use instrument. Its push-button operation and low-maintenance makes DryCal the preferred calibration tool of industrial hygienists, environmental scientists, and laboratories worldwide.

In addition to volumetric readings, the DC-2 offers automatic atmospheric pressure and user-definable temperature corrections, based on built-in precision sensors. These corrections result in standardized readings, which are especially useful with mass flow devices. A four-line LCD display offers continuous readouts of volumetric and standardized flow rates, flow averages, and the number of readings in the averages, which users can define from 1 to 100 measurements. The DC-2 includes other important features, such as an RS-232 interface for data download into a PC spreadsheet, and a built-in parallel port for data printing to Bios' 4"-wide battery-powered thermal printer.

Three interchangeable flow-measuring cells provide a broad dynamic range from 1 ml to 50,000 ml per minute. All flow cells use the same near-frictionless piston and photo optic sensing technology to obtain flow readings quickly and accurately.

U.S. Patents 5,456,107 and 5,440,925.

- **3 Interchangeable Flow Cells**
- **NIST Traceable**
- **Standardized Temperature & Pressure Correction**
- **Fast Dry Piston Technology**



Bios International Corporation
 10 Park Place, Butler, NJ 07405 USA
Phone (973) 492 8400
Fax (973) 492 8270
Toll Free (800) 663 4977

Web www.biosint.com
Email sales@biosint.com

DryCal® DC-2
Primary Flow Calibrator

DryCal® DC-2

FEATURES

Simple Operation

Provides the user with accurate flow readings with the push of a button.

Fast

Quick set-up and rapid readings save valuable time.

Alphanumeric Display (LCD)

Simultaneously displays volumetric and standardized flow rates, average flow rates, number of samples in the running averages and battery charge level.

Sealed Lead-Acid Battery

Can be charged indefinitely. The DC-2 can be used while charging.

Three Interchangeable Flow Cells

Three flow cells cover a broad range:
1–50000 ml/min.

Patented Graphite Composite Piston Assembly

Eliminates the inherent inaccuracies and mess associated with bubble soap, no Mercury seals

Automatic Sampling

1–100 readings as running average (user-selected, 10 is the default), repetition rate can be set as instantaneous or 1–255 minutes (user-selected)

Built-In Leak Test

Quality assurance self-test allows user to periodically verify flow cell integrity

Hands Free Auto-Mode

Flow readings can be taken continuously in the auto mode, providing hands-free calibration

RS-232 and Parallel Ports

NIST Traceable | CE Approved

Bios continuously seeks to improve its products and their characterization. Specifications are subject to change. Please contact Bios for most recent specifications.

SPECIFICATIONS

Size 7.75" x 4" x 7.75" • 197 mm x 102 mm x 219 mm

Weight 51 oz. • 140 g

Configuration Interchangeable modular flow cells, standardizing sensors in base

Flow Ranges | Air Flow Accuracy

Model	1% Flow Range	Extended Flow Range*
DC-LC-1	10–300 ml/min	1–500 ml/min
DC-MC-1	100–5000 ml/min	10–10000 ml/min
DC-HC-1	500–30000 ml/min	50–50000 ml/min

*Contact Bios for extended flow range specifications.

Specifications are based on averaged readings; lower limit is based on self-tested maximum leakage.

Standardized (Corrected) Accuracy

Temp. Range	Typical	Maximum
293–303 °K (20–30 °C)	±1.1%	±1.4%
273–323 °K (0–50 °C)	±1.3%	±2.1%

Temperature Operating Range 0–55 °C

Suitable Gases Non-corrosive, humidity less than 80%, non-condensing

Time per Reading Approximately 1–15 seconds, flow-dependent

Operating Modes Single cycle, 10 readings, or auto-mode

Measuring Cell Graphite piston in borosilicate glass cylinder, clearance-sealed

Temperature and Pressure Sensors Solid state, located in base, in-line version available (non-ambient)

Valve Latching design (to prevent heating of gas stream), self-relieving

Battery System 6V, 1.3A lead-acid

AC Charger | Adapter Choice of 100 VAC, 50 Hz or 100–125 VAC, 60 Hz or 200–240 VAC 50–60 Hz

Printer Port Standard parallel (not compatible with printers that require Microsoft Windows)

Serial Port Standard data format, 9600-baud rate

Display 4 line x 20 character LCD display

Warranty Product, 1 year; battery, 6 months

The recertification program offered by Bios is elective and is not included as a warranty item.

DryCal® DC-2
Primary Flow Calibrator